# Online Appendix A

In this section we check robustness of our results by analyzing differences in estimates for 3 different values of bandwidth parameter: 0.275, 0.475 and 0.6. 0.475 is a value used throughout the paper, 0.275 is the lowest bandwidth value for which all WTP except SQ are below 100 EUR and 0.6 is the highest value we considered (as it is generally recommended to use lowest bandwidth value which fulfill chosen criteria). In Table A1. we provide characteristics of WTP for these values of bandwidth analogously as it was done in Table 2. We note that mean WTP are quite robust with respect to choice of a bandwidth. Although mean estimates for bandwidth values of 0.275 and 0.6 lie more than two standard errors from estimates for bandwidth = 0.475, they are fairly close to each other. Dispersion of WTP change significantly between different bandwidth values. To investigate how change in dispersion influence our results we conducted a graphical analysis presented in Figure A1. In every panel we plotted parameters estimates for chosen bandwidth values: 0.275 (blue lines), 0.475 (red lines) and 0.6 (yellow lines) with their 95% confidence intervals (dotted lines) against longitude. We see that, indeed increased dispersion for bandwidth of 0.275 leads to several ‘peaks’, with very wide confidence intervals, for every parameter. Because of that for lower bandwidth value many WTP estimates in local models occurred insignificant. Estimates for 0.6 bandwidth usually lies within confidence interval for estimates for bandwidth of 0.475. We therefore conclude that choosing bandwidth of 0.475 is justified as it allows to avoid implausible ‘peaks’ in WTP (especially for SQ) and insignificant estimates. We also do not see any reason to choose bandwidth above 0.475 as the plots does not reveal any particular under-smoothing when comparing lines for bandwidth of 0.475 with lines for bandwidth of 0.6.

Table A1. Characteristics of distributions of estimated WTP from GWMNL model for different bandwidth values (stanrard errors in [] brackets, coefficients in WTP-space, in EUR per year)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Bandwidth = 0.275** | | **Bandwidth = 0.475** | | **Bandwidth = 0.6** | |
|  | **Mean** | **Std. Dev.** | **Mean** | **Std. Dev.** | **Mean** | **Std. Dev.** |
| ***NAT*1** | 16.45\*\*\* | 10.94\*\*\* | 15.71\*\*\* | 6.88\*\*\* | 15.54\*\*\* | 5.72\*\*\* |
| (passive protection of most valuable forests – substantial improvement) | (0.22) | (0.50) | (0.13) | (0.17) | (0.10) | (0.11) |
| ***NAT*2** | 24.09\*\*\* | 15.47\*\*\* | 23.08\*\*\* | 10.02\*\*\* | 22.76\*\*\* | 8.13\*\*\* |
| (passive protection of most valuable forests – partial improvement) | (0.31) | (0.58) | (0.18) | (0.26) | (0.14) | (0.17) |
| ***TRA*1** | 29.66\*\*\* | 16.77\*\*\* | 28.30\*\*\* | 11.03\*\*\* | 27.85\*\*\* | 9.08\*\*\* |
| (the amount of litter in forests – partial improvement) | (0.33) | (0.44) | (0.20) | (0.23) | (0.15) | (0.17) |
| ***TRA*2** | 39.81\*\*\* | 22.77\*\*\* | 37.86\*\*\* | 14.76\*\*\* | 37.13\*\*\* | 11.86\*\*\* |
| (the amount of litter in forests – substantial improvement) | (0.46) | (0.70) | (0.27) | (0.36) | (0.20) | (0.24) |
| ***INF*1** | 12.94\*\*\* | 7.53\*\*\* | 12.71\*\*\* | 5.12\*\*\* | 12.64\*\*\* | 4.38\*\*\* |
| (tourist infrastructure – partial improvement) | (0.15) | (0.19) | (0.09) | (0.10) | (0.07) | (0.08) |
| ***INF*2** | 21.18\*\*\* | 11.55\*\*\* | 20.61\*\*\* | 8.29\*\*\* | 20.41\*\*\* | 7.12\*\*\* |
| (tourist infrastructure – substantial improvement) | (0.22) | (0.26) | (0.14) | (0.15) | (0.11) | (0.11) |
| ***SQ*** | 38.72\*\*\* | 37.59\*\*\* | 39.38\*\*\* | 26.29\*\*\* | 39.59\*\*\* | 23.32\*\*\* |
| (alternative specific constant for the no-choice alternative) | (0.63) | (1.14) | (0.39) | (0.46) | (0.30) | (0.37) |
| ***COST*** | 0.06\*\*\* | 0.04\*\*\* | 0.06\*\*\* | 0.02\*\*\* | 0.06\*\*\* | 0.02\*\*\* |
| (annual cost – tax increase) | (<0.01) | (<0.01) | (<0.01) | (<0.01) | (<0.01) | (<0.01) |

\*\*\* p-value < 1%, \*\* p-value in [1%,5%), \* p-value in [5%, 10%)

Figure A1. Parameters values with different bandwidths values plotted against longitude

# Online Appendix B. Results of regressions where the dependent variables are the absolute values of differences between WTP from GWMNL and location-specific MXL.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **SQ** | ***NAT*1** | ***NAT*2** | ***TRA*1** | ***TRA*2** | ***INF*1** | ***INF*2** | |
|  | (alternative specific constant for the no-choice alternative) | (passive protection of most valuable forests – partial improvement) | (passive protection of most valuable forests – substantial improvement) | (the amount of litter in forests – partial improvement) | (the amount of litter in forests – substantial improvement) | (tourist infrastructure – partial improvement) | (tourist infrastructure – substantial improvement) | |
| Constant | 64.08\*\*\* | 6.89\*\*\* | 10.20\*\*\* | 9.29\*\*\* | 12.44\*\*\* | 4.77\*\*\* | 8.38\*\*\* | |
| (9.21) | (1.57) | (2.45) | (2.56) | (3.63) | (1.07) | (1.91) | |
| Area of coniferous forests | -0.17 | 0.01 | 0.03 | 0.08 | 0.13 | 0 | 0.01 | |
| (0.20) | (0.03) | (0.05) | (0.06) | (0.08) | (0.02) | (0.04) | |
| Area of deciduous forests | -0.5 | 0.22\* | 0.33\* | 0.29 | 0.34 | 0.05 | 0.19 | |
| (0.66) | (0.11) | (0.18) | (0.18) | (0.26) | (0.08) | (0.14) | |
| Area of mixed forests | -0.5 | 0.01 | -0.02 | -0.02 | -0.04 | 0.02 | -0.04 | |
| (0.49) | (0.08) | (0.13) | (0.14) | (0.19) | (0.06) | (0.10) | |
| Area of forests with age >120 | -3.03 | -1.26\*\*\* | -1.63\*\*\* | -2.09\*\*\* | -2.57\*\*\* | -1.04\*\*\* | -2.09\*\*\* | |
| (2.13) | (0.36) | (0.57) | (0.59) | (0.84) | (0.25) | (0.44) | |
| Average Euclidean distance to a forest | -7.31\*\* | 0.21 | 0.83 | -0.2 | 0.07 | -0.17 | -0.42 | |
| (3.42) | (0.59) | (0.91) | (0.95) | (1.35) | (0.40) | (0.71) | |
| Built-up area | 0.28\*\* | 0.04\* | 0.05\* | 0.15\*\*\* | 0.17\*\*\* | 0.03\*\* | 0.06\*\* | |
| (0.12) | (0.02) | (0.03) | (0.03) | (0.05) | (0.01) | (0.02) | |
| Area of forests with no. of species > 6 | 0.15 | 0.20\*\* | 0.27\*\* | 0.35\*\* | 0.45\*\* | 0.17\*\*\* | 0.36\*\*\* | |
| (0.49) | (0.08) | (0.13) | (0.14) | (0.19) | (0.06) | (0.10) | |
| No. of observations per location | -1.43\* | -0.45\*\*\* | -0.76\*\*\* | -0.39\* | -0.58\*\* | -0.06 | -0.21 | |
| (0.74) | (0.13) | (0.20) | (0.21) | (0.29) | (0.09) | (0.15) | |
| **Model characteristics** | | | | | | | |
| R2 | 7.00% | 16.00% | 16.00% | 19.00% | 15.00% | 12.00% | 16.00% | |
| n (observations) | 253 | 253 | 253 | 253 | 253 | 253 | 253 | |
| k (parameters) | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |

\*\*\* p-value < 1%, \*\* p-value in [1%,5%), \* p-value in [5%, 10%)